

AN - 2002-436636 [46]

TI - *Baculovirus IAP repeat domain or RING-finger domain-containing survivin-like polypeptides and encoded DNAs, applicable in diagnosis and screening compounds for treating various cancers and apoptosis abnormality*

AB - NOVELTY :

A polypeptide contains an amino acid sequence identical or substantially similar to that in the sequence of (V), its amide, ester or their salt.

- DETAILED DESCRIPTION :

INDEPENDENT CLAIMS are also included for the following: (1) a polynucleotide containing a polynucleotide encoding the polypeptide with a sequence of (V), its amide, ester or their salt; (2) a recombinant vector; (3) a transformant containing the recombinant vector; (4) a process for producing the polypeptide with a sequence of (V), its amide, ester or their salt, by culturing the transformant to give the product for accumulation and isolation; (5) drugs containing the polypeptide, its amide, ester or their salt, or the polynucleotide; (6) an antibody for the polypeptide, its amide, ester or their salt; (7) drugs containing the antibody; (8) diagnostics containing the antibody, or the polynucleotide; (9) an antisense DNA complementary to the DNA encoding the polypeptide with a sequence of (V) or its amide, ester or their salt, or a part of its, and having an activity of inhibiting the DNA expression; (10) drugs containing the antisense DNA; (11) a method for screening compounds or their salts promoting or inhibiting function of the polypeptide with a sequence of (V), its amide, ester or their salt by using them; (12) a kit for screening compounds or their salts promoting or inhibiting function of the polypeptide with a sequence of (V), its amide, ester or their salt containing them; (13) compounds or their salts thus screened; (14) drugs containing such promoters or inhibitors; (15) preventives or remedies for cancer containing the screened inhibitor; (16) preventives or remedies for apoptosis abnormality containing the screened promoters; (17) a method for preventing or treating apoptosis abnormality by administering the polypeptide with a sequence of (V), its amide, ester or their salt, or its encoded polynucleotide, or screened promoters, to mammals; (18) a method for preventing or treating cancer by administering the antibody, antisense DNA, screened inhibitors to mammals; (19) the use of the polypeptide, its amide, ester or their salt, its encoded polynucleotide and screened promoters for producing preventives or remedies for apoptosis abnormality; (20) the use of the antibody, antisense DNA and screened inhibitors for producing preventives or remedies for cancer; (21) a polypeptide containing an amino acid identical or substantially similar to a sequence of (IX), its amide, ester or their salt; (22) apoptosis promoters, or preventives or remedies for cancer containing a polypeptide with a sequence of (IX), its amide, ester or their salt; (23) preventive or remedies for apoptosis abnormality containing an antibody against the polypeptide with a sequence of (IX), its amide, ester or their salt, or its antisense DNA; (24) diagnostics for cancer containing an antibody against the polypeptide with a sequence of (IX), its amide, ester or their salt, or the polypeptide-encoded polynucleotide; (25) a method for screening compounds or their salts promoting or inhibiting the polypeptide with a sequence of (IX), its amide, ester or their salt by using them; (26) a kit for screening compounds or their salts promoting or inhibiting the polypeptide with a sequence of (IX), its amide, ester or their salt containing them; (27) apoptosis promoters or inhibitors thus screened; (28) drugs containing the screened promoters or inhibitors; (29) preventives or remedies for cancer containing the screened promoters; (30) preventives or remedies for apoptosis abnormality containing the screened inhibitors; (31) a method for preventing or treating cancer by administering the polypeptide with a sequence of (IX), its amide, ester or their salt, or the polypeptide-encoded polynucleotide to mammals; (32) a method for preventing or treating apoptosis abnormality by administering the antibody for the polypeptide with a sequence of (IX), its amide, ester or their salt, or the antisense DNA to mammals; (33) the use of the polypeptide with a sequence of (IX), its amide, ester or their salt, the polypeptide-encoded polynucleotide, or the screened promoters for producing preventives or remedies for cancer; (34) the use of the antibody for the polypeptide with a sequence of (IX), the antisense DNA, or the screened inhibitors for producing preventives or remedies for apoptosis abnormality; (35) a polypeptide with an amino acid sequence identical or substantially similar with a sequence of (VII), or its amide, ester, or their salt; (36) a polynucleotide containing a polynucleotide encoding the polypeptide with a sequence of (VIII); (37) a recombinant vector containing a polynucleotide with a sequence of (VIII); (38) a transformant containing the recombinant vector; (39) a process for producing the polypeptide with a sequence of (VII), its amide, ester or their salt by culturing the transformant to form the product for accumulation and collection; (40) an antibody against the polypeptide with a sequence of (VII), its amide, ester or their salt; (41) diagnostics containing the antibody against the polypeptide with a sequence of (VII), and optionally an antibody for the polypeptide with a sequence of (V) or polynucleotides for the polypeptides with sequences of (VII) or/and (V); and (42) a method for diagnosis of cancer by using the antibodies for the polypeptides with sequences (VII) or/and (V); or the polynucleotides with base sequences of (VIII) and (IV).

- ACTIVITY :

Cytostatic.

**- MECHANISM OF ACTION :**

None given in source material.

**- USE :**

The polypeptides and encoded DNAs are applicable in diagnosis and screening compounds for treating various cancers and apoptosis abnormality, including gene therapy.

**- ADVANTAGE :**

The proteins and encoded DNAs are for screening drug candidates with SLIP-ring functions.

**- BIOTECHNOLOGY :**

Preferred Polypeptides: Such polypeptide is particularly one with a sequence of (V), or (VII). The polypeptide can also be one with a sequence of (IX) which has apoptosis promoting effect. Preferred Polynucleotides: The polynucleotide is preferably a DNA, e.g. with a base sequence of (VI), or (VIII).

**- PHARMACEUTICALS :**

Preferred Drugs: Such drugs are particularly caspase inhibitors, apoptosis inhibitors, or preventives or remedies for apoptosis abnormality, or preventives or remedies for cancer.

**- BIOLOGY :**

Preferred Antibodies: The antibody is especially a neutralizing antibody with an activity of inactivating the polypeptide with a sequence of (V), its amide, ester or their salt.

Preferred Diagnostics: Such diagnostic is e.g. for cancer.

**- INSTRUMENTATION AND TESTING :**

Preferred Screening Methods: Such method is by comparing the caspase inhibitory activity of the polypeptide with a sequence of (V) in the presence or absence of a test compound; or by comparing the mRNA expression dose of the polypeptide when cells capable of expressing the polypeptide is culture in the presence or absence of a test compound; or by measuring the expression dose of a reporter gene when culturing cells transformed with a DNA obtained by ligating the promoter and enhancer domains of the polypeptide, or promoter domain of the polypeptide to upstream of a reporter gene in the presence or absence of a test compound, particularly by adding an (immobilized) antibody for the polypeptide and labeled version of the polypeptide into the culture solution for competitive reaction and assay.

Preferred Diagnosis: In diagnosing cancer, the ratio of the polypeptides with amino acid sequences of (V) and (VII), and that of the polynucleotides with base sequences of (VI) and (VIII) are determined. When the proportion of the polypeptide with an amino acid sequence of (V) is higher than that with an amino acid sequence of (VII), and the proportion of the polynucleotide with a base sequence of (VIII) is higher than that with a base sequence of (VI) in a patient's specimen, the patient is judged to be suffering from cancer, or having a higher possibility of suffering from cancer.

**- ADMINISTRATION :**

Administration is oral or non-oral, e.g. at 0.1-10 mg by intravenous.

**- EXAMPLE :**

A SLIP-gene fragment was searched from a human gene database and then obtained from the full-length SLIP gene (SLIP-long, SLIP-short and SLIP-ring) for use in constructing a vector then transformant for clarification of the SLIP protein function and that of its partial peptide.

1W - BACULOVIRUS REPEAT DOMAIN RING FINGER CONTAIN ENCODE APPLY DIAGNOSE SCREEN  
COMPOUND TREAT VARIOUS CANCER ABNORMAL

PN - WO0233071 A1 20020425 DW200246  
AU9426701 A 20020429 DW200255  
JP2002355062 A 20021210 DW200311

IC - C12N15/09; A61K31/7088; A61K31/711; A61K38/17; A61K38/55; A61K39/395; A61K48/00; A61P35/00;  
A61P43/00; C07K14/47; C07K14/82; C07K16/18; C07K16/32; C12N1/15; C12N1/19; C12N1/21;  
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G01N33/566; G01N33/574

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ICAN - A61K48/00

WO0233071

ICCI - A51K31/7088; A51K38/55; A51K39/395; A51K48/00; A51P35/00; A51P43/00; C07K14/438; C07K14/82;  
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ICCN - A51K48/00

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DC - B04 D16  
- S03

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AP - WO2001JP08071 20011016; AU20010094267 20011016; JP20010316533 20011016; [Based on  
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PR - JP20000386809 20001220; JP20000316721 20001017

WO 02/33071

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Cys Ala Glu Cys Ala Pro Gly Leu Gln Leu Cys Pro Ile Cys Arg  
35                      40                      45                      47